Response to the Office Action

In the non-final Office Action of 18 September 2006, the Examiner accepted the drawings filed on 12 April 2004 and rejected claims 1-20. Claims 1-8 and 17 were rejected under 35 U.S.C. 102(b) as being anticipated by Harms et al., US 5,415,163 A ("Harms"). Claims 1-20 were also rejected under 35 U.S.C. 102(b) as being anticipated by Rapoport et al., US 4,875,486 A ("Rapoport"). Applicant notes that although the Examiner indicated the patent number for Rapoport as "US 4,875,786," it is believed that the proper patent number is US 4,875,486, as indicated above. The Examiner further rejected Claims 1-20 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27-46 of U.S. Patent No. 6,723,048 B2, which is the parent to the present continuation application.

With respect to the 102(b) rejections, Applicant respectfully disagrees with the Examiner's position that and of the claims of the present application are anticipated by the magnetic resonance imaging technology disclosed in either Harms and Rapoport. While it is true that magnetic resonance imaging ("MRI") technologies employ body part receivers, nodes, magnets, and a source and a receiver coupled to one of the nodes, and that MRI devices can be used for glucose detection, the apparatuses and methods in which the body part receivers, nodes, magnets, sources and receivers are utilized in MRI technologies are completely different from the technology reflected in the amended claims of the present application.

Magnetic resonance imaging (also known as, nuclear magnetic resonance spectroscopy) systems basically operate by first applying a magnetic field to a subject so as to align, in a uniform manner, the nuclei of atoms within a portion of the subject to be tested. These aligned nuclei are then briefly exposed to an Rf signal set to a specific frequency, which causes each of the various aligned nuclei at a lower energy state to spin or flip to a higher energy state, known

as a resonant frequency. The magnetic field is then removed or altered, causing the nuclei forced to a resonant frequency to become unstable and return to their original lower energy state. This later process is called spin relaxation. The faint energy released from the spin relaxation is then collected as a representation of the nuclei within the sample. The Rf signal is only used to excite the nuclei to a higher energy state, the Rf signal is not detected by the apparatuses, is not used to make any determination about the sample, and is removed before the spin relaxation energy is detected. Further, the magnetic field(s) are only used to align and then release the nuclei in the sample, and are removed or altered before spin relaxation can occur. In addition, neither the magnets nor the transmission or detection nodes are in contact with sample.

The invention described and claimed in the amended claims of the present application uses the Rf signal to directly measure a characteristic of a sample and uses the magnetic field throughout the transmission and detection processes to improve the Rf signal detected by the reflection node. Further, the Rf signal transmitted by the transmission node covers a frequency spectrum, and is not transmitted at just a single frequency. The Rf signal received by the reflection node can be analyzed at a single frequency, but can also be analyzed at a number of different frequencies. Finally, it is a change in the magnitude or amplitude of the Rf signal being transmitted and detected, at one or more frequencies, which is used to determine the characteristics of the sample, not the spin relaxation energy. As noted in the amended claims, the sample is also positioned to be in contact with both the transmission and detection nodes. The claims set forth in the claims listing have been amended to highlight a number of these distinctions, thereby overcoming the rejections to claims 1-20 as being anticipated by their Harms or Rapoport.

The amended claims also address the basis for the nonstatutory obviousness-type double patenting rejection. The amended claims are not obvious in view of Applicant's prior patent and are patentable distinct. No double patenting rejection would be appropriate in view of the amended claims.

Claim Amendments

Applicant respectively amends the claims as set forth in the following claim listing. No claims have been cancelled. Amendments are hereby made, in the claim listing, to the following claims: 1-20.